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**DETERMINANTS OF ORGANIZATIONAL PERFORMANCE OF
SMALL AND MEDIUM MANUFACTURING FIRMS IN NAIROBI
COUNTY**



**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF
BUSINESS ADMINISTRATION AT STRATHMORE UNIVERSITY**

APRIL 2020

DECLARATION

I, the undersigned, declare that this project is my original work and has not been submitted for examination in any other institution.

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Delphine Uwase

MBA/110575

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Approval

This research project has been submitted for examination with my approval as the university supervisor



Dr Everlyne Makhanu

Lecturer

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Sign:

Date:

ABSTRACT

Small and Medium Enterprises (SMEs) are vital contributors to the GDP growth, employment levels, and social welfare of Kenya. The manufacturing sector is a critical component of the government's economic development agenda. However, in the recent past, SMEs in the manufacturing sector have witnessed a continuous trend of poor performance, which has caused deterioration in their development, as well as business closure. The current study sought to build on available literature. It examined the critical determinants of organizational performance of SMEs in the manufacturing sector in Nairobi County. The study specifically examined how organization structure, technology ability, and management competency affect organizational performance. The theories that guided the study were the dynamic capabilities theory and the teleological theory and the study adopted a descriptive survey research design, with a quantitative focus. The target population was the 503 registered SMEs in the manufacturing sector in Nairobi County. The research sampled 223 of those SMEs and considered one management personnel per firm as the respondents. Thus, the sample size for the study was 223 managers. The study utilized a structured questionnaire, and the instrument was pretested on 10% of the sample. The study obtained an 83% response rate and the collected research data was coded into SPSS. Descriptive and inferential statistics were used to analyse the collected data. The findings were graphically presented. The results of the regression analysis showed that 51.1% ($R^2 = .511$) variation in the organizational performance of the SMEs could be determined by their organization structure, their technological capability and their management competency. The research concluded that a unit change in organization structure would lead to a 52.6% change in performance; a unit change in technology capability leads to a 13.4% change in performance; and a unit change in management competency leads to a 5.3% change in performance. The study recommends that the management of the SMEs should increase investment in putting processes in place and in continuous restructuring, which will enhance firm coordination and foster employee collaboration. The study further recommends that SME management should encourage all cadres of employees to be highly innovative and technologically savvy. The study notes that more research is required to explore why and how the research determinants affect performance; to see how the research variables affect one another; and how they relate when other measures of performance are assessed. Finally, there should be more research conducted on the determinants of organizational performance of SMEs in other sectors.

Keywords: *Organization Performance, Organization Structure, Technology Capability, Management Competency, Small and Medium Enterprises (SMEs)*

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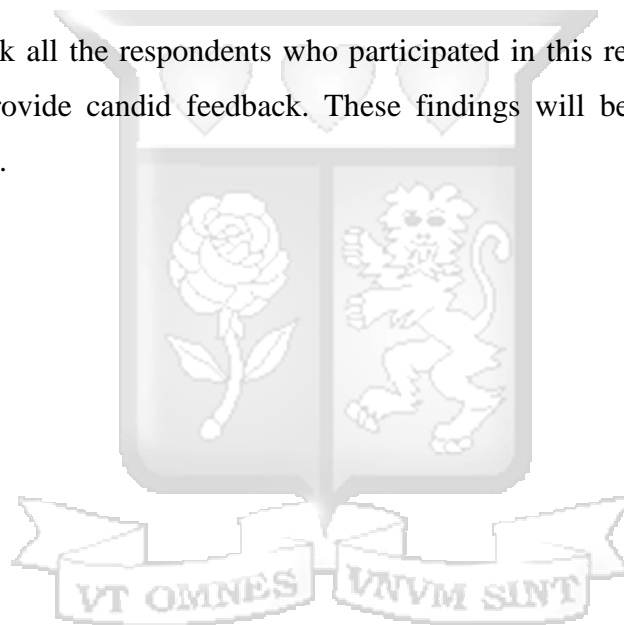
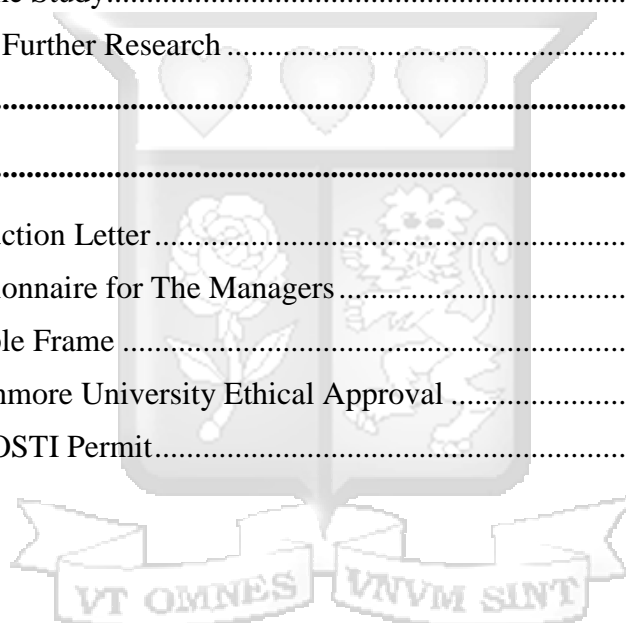


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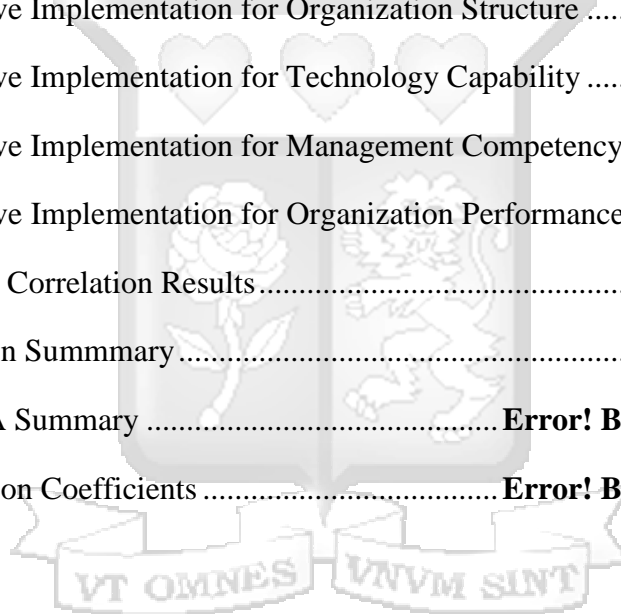
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ABBREVIATIONS AND ACRONYMS

EPZ	Export Processing Zone
GDP	Gross Domestic Product
GNP	Gross National Product
KAM	Kenya Association of Manufacturers
KIPPRA	Kenya Institute for Public Policy and Research and Analysis
ROA	Return on Assets
ROK	Republic of Kenya
SME	Small and Medium Enterprises
UNIDO	United Nations Industrial Development Organization



OPERATIONAL DEFINITION OF TERMS

Technology Capability	The ability of an organization to understand and utilize technology to create competitive advantage (Emmanuel, 2017).
Management Competency	This refers to the managerial capacity and ability to plan, organize, lead, communicate, and control their business activities to achieve their goals more efficiently and effectively (Basile & Faraci, 2015).
Manufacturing	The transformation of raw materials, substances, or components into tangible products mechanically, physically, or chemically (CIMA, 2010).
Organization Structure	This refers to the work roles distribution as well as administrative mechanisms that allow an organization to be operational, synchronized, and controlled in its business activities and manage its resources (Fakhar, Rana, Ayesha, & Lalarukh, 2012).
Organization Performance	The process of measuring an organization's outputs or implementation against its intended goals and objectives (Kuria & Memba, 2016).
Small and Medium Enterprises	These are businesses whose personnel numbers range from 1-50 and whose capital outlay is less than kshs.5,000, 000 (Gathungu & Baariu, 2018).

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

The attainment of economic growth and development is a goal in both developing and developed countries. This can be achieved through the efficient utilization of the available resources and devising measures to attain full employment. Therefore, the promotion, establishment and growth of the small and medium enterprises (SMEs) assist in creating employment and maximizing the utilization of both human and locally available resources (Cunningham & Lagan, 2005). SMEs bring about innovative growth and poverty reduction, thus contributing to economic dynamism in capitalistic economies (Nkuah, Tanyeh, & Gaeten, 2013).

According to the United Nations Industrial Development Organization-UNIDO (2015), the world manufacturing sector has continued to struggle in its growth since the 2008 global financial crisis. The struggle of the developed economies made it impossible for developing and emerging economies to participate in the global manufacturing sector. Their participation was, however, been met with many challenges, and UNIDO anticipates that the sector will continue to deceleration over the next few years. The sector is in transition in many countries. It continues to face several challenges that are significant to its performance, as pointed out by the Chartered Institute of Management Accountants (2010). Most of the world's manufacturing is undertaken by SMEs, as affirmed by the Edinburg Group report (2012), which stated that SMEs constitute about 95% of all the enterprise across the world. However, according to Katua (2014), SMEs face unique challenges that hinder their growth and innovativeness. It is for these reasons that measures should be undertaken to reduce these challenges, which are not only defacing the SMEs, but also the manufacturing sector.

According to Kombo (2011), globally, more than one million SMEs are established every year. Out of these, 40% close within one year, 80% of them are out of business in a span of five years, and by the tenth year, 96% close down their operations. In the United States of America, the Small Business Administration (SBA) found that 24% of all new businesses in the country failed within the first two years, and 63% failed within the first six years (Wheelen & Hunger, 2009). In Uganda, the manufacturing sector has, over the years, been continued to struggle and has experienced slow growth, below the sub-Saharan average (Republic of Uganda, 2010). The

sector's contribution to Uganda's GDP lags behind that of other regional countries like Kenya, Tanzania and Burundi, even though ahead of Rwanda (KIPPRA, 2014).

In Kenya, the manufacturing sector constitutes 70% of the industrial sector's contribution to Gross Domestic Product (GDP) and is recognized by the Kenya Vision 2030 as a key economic driver, as the sector's aim is to realize a sustained annual growth of 15% by 2022 (KAM, 2017). In spite of this, the sector has, over the years, continued to perform poorly and lag behind the overall economic growth by 1.9% (KAM, 2015). Small and medium manufacturing enterprises form the bulk of this sector in Kenya (KIPPRA, 2014).

1.1.1 Organizational Performance

Performance is used to dictate organization growth and development, measuring the organization's outputs and results against its intended objectives and goals. The performance of an organization shows the level of improvement made by a firm within a period of time. A firm's performance serves as a barometer, which measures the success of the company. Hence it is used as a benchmark for investors to invest their funds (Kihara A. , 2016). Organizational performance is when a firm realizes proper coordination through effective communication, scheduling and task management (Protogerou, Caloghirou, & Lioukas, 2011).

Theodosiou, Kehagias, and Katsikea, (2012) argued that an organization's performance could be realized through proper coordination of tasks that increase the efficiency and effectiveness of the firm's performance. There are no unanimously agreed on measures of organizational performance among scholars and practitioners (Tseng & Lee, 2014), thus, it can be measured in financial and non-financial ways. Lopez-Nicolas and Meroño-Cerdán (2011) emphasized that organizational performance must be enhanced for organization programs to be effective. Maher and Andersson (2017) argued that a firm's performance outcomes result from market successes or when market positions are achieved and fundamental changes occur over time.

As above mentioned, measuring a firm's performance can be divided into two categories, financial measures, and non-financial measures. Additionally, a firm's performance can be measured by strategic measures (Gathogo, 2013). According to Ganeshkumar and Nambirajan (2013), financial measures include market share, sales growth, profit margin, share price, average selling price, return on investment and the return on sales. Non-financial measures include customer satisfaction, employee satisfaction, environmental performance, overall product quality, overall competitive position, social performance, efficiency, effectiveness and relevance (Mahmood & Hanafi, 2013). In this study, non-financial measures were adopted to

measure organization performance, focusing on customer satisfaction, customer retention, supplier relationship, and environmental performance. The measures were relied upon in the study due to the lack of adequate financial reporting capacity among many of the SME's which, would limit the availability of secondary accounting data.

1.1.2 Determinants of Organizational Performance

Organization performance is constrained by both external and internal factors. Internal factors include the inability to carry out research, which lowers chances of innovation, the inability to recruit competent and qualified human resources, lack of capital for growth, limited sources of financing, and lack of entrepreneurial skills. External factors include the business environment, dynamic and radical technological changes, and minimal barriers to entry in the market, (Mahmood & Hanafi, 2013). Azubuike (2013) identified three critical groups of factors that determine SME performance. One, the environmental factors, which include the properties of the industry, average income, and industrial alteration. Second, the organization factors, which are organization structure, management competency and company size. Lastly, the human factor, which includes the firm's employees.

Nderi and Mwangi (2015) averred that the performance of any enterprise is determined by a combination of owner's skills, which range from financial skills, project management skills, leadership quality, marketing skills, and human resources management. They further asserted that SME owners are likely to enhance the competitiveness of their enterprises if they have the ability to analyze the business environment, develop clear goals, develop strategies, and implement and evaluate strategies based on their formulated objectives.

Additionally, Mwanja (2015) argued that business owners would have a competitive advantage if they can develop financial budgets, have an aligned organization structure, predict market dynamics, and possess human resource management skills. He further concludes that the performance of small enterprises is purely determined by the competencies of the owners and their resource capacity. The current research focused on how management competency, organization structure, and technological capability influence the organizational performance of SMEs. The study relied on these internal factors of the SME's, which are expected to be pivotal in predicting the organization's performance.

Management competency plays an important role in overcoming challenges faced by an organization; thus, it being strongly linked to the organization's performance (Taiwo, Ayodeji, & Yusuf, 2012). Management's role is critical in the direction and purpose of an organization,

through goal setting, motivation, practical plans and support for innovation (Sullivan, 2011). The role of management competency in an organization is to ensure proper communication, effective implementation of strategies, maintenance of beneficial relationships among all stakeholders (Basile & Faraci, 2015), and participating in resource allocation and deployment for innovation, entrepreneurial, and incentive systems (Simon, Bartle, Stockport, Smith, & Klobas, 2015).

An organization structure defines the interactions of all stakeholders in the organization, i.e., the communication flow, the relationship between managers and their subordinates, and how job tasks are formally divided, grouped, and coordinated (Munyoroku, 2012). Distelzweig (2004) stated that organization structure is the way an organization is able to arrange its resources in order to achieve the set organization goals. Mbuva, Rambo and Oketch (2018) found out that organization structure alignment, task allocation, work delegation and centralization efforts are vital to driving firm performance. Kihara, Bwisa and Kihoro (2016) posit that structural alignment and adaptation can be critical to organizational improvement within SMEs.

Technological capability has remained an indispensable tactical resource utilized by organizations to differentiate themselves and achieve competitive advantage, especially in the manufacturing industry (Walsh, 2012). In addition, organizations that have higher technological practices and skills appear to show higher levels of performance and are perceived to be more creative and innovative (Pang & Chih, 2012). These companies achieve great efficiency by inventing process innovations (Terjesen, Patel & Covin, 2011), and engaging in high differentiation strategy of creating products that respond to the evolving market (Peled & Dvir, 2012). Much theoretical research has been focused on technological capabilities; however, there has been less research on its relationship with organizational performance (Tsai, 2014).

1.1.3 Small and Medium Enterprises

With increased poverty, countries of the world have come to appreciate the significant role of SMEs in social-economic development. In developing countries, micro and small enterprises have been a source of employment for decades despite the copious challenges experienced by entrepreneurs, ranging from financing, production, marketing, and human resource development (Mwania, 2015). In the past decade, a number of governments in developing countries have emphasized boosting their economic growth through the formulation of policies

that support micro-enterprises. Small and medium enterprises (SMEs) can be regarded as income-generating companies that employ 1-50 workers (Omwono, Oyugi, & Wanza, 2015).

Mbuva, Rambo and Oketch (2018) posit that despite the critical role played by the SMEs towards economic growth, lack of clear management philosophy, inadequate staff competencies, lack of structural fit and human resource practices have derailed the performance of small businesses. The 2019 Viffa Consult report on the competitiveness of Kenya's SME sector asserted that out of the 840, 000 jobs created in 2018, 83.6% of the employment opportunities grew from SMEs. The report noted that despite visible resilience within the SMEs, the sector has faced a myriad of challenges that have resulted in a decrease growth. Njoroge and Bett (2019) noted that SMEs in Kenya have performed considerably low in the recent past, which is a significant concern for government policymakers, business practitioners and the private sector, hence the need for further examination of their operating environment.

In recognition of the important role played by the SME sector, the Government of Kenya has, over the years, come up with policies and programs to help strengthen this sector. The Micro and Small Enterprises (MSE) Act (2012) formulated a framework for the MSE sector by proposing the creation of bodies to support the growth of the sector. Further, Kenya's Vision 2030 proposes the development of at least five SME industrial parks in major cities (Republic of Kenya, 2015).

Small and medium scale manufacturing is an important segment in the SME sector. Small scale production is characterized by high labor involvement, which can help to reduce the high levels of unemployment. Most of these enterprises do not require intensive capital investment, thus are easier to set up and operate than the large manufacturing enterprises (Tarus & Nganga, 2013). According to the Kenya Association of Manufacturers (KAM) (2015), Kenya's industrial sector is comprised of manufacturing, mining and quarrying, and construction activities. This sector contributes 14% to the Gross Domestic Product (GDP). Manufacturing contributes 9.4% to the industrial sector, accounting for 70% of the sector's contribution to the GDP (KIPPRA, 2014).

Furthermore, the contribution of the manufacturing sector to the total formal employment in Kenya is 13%, while informal manufacturing accounts for 20% of informal employment (KAM, 2015). This study focusses on small and medium manufacturing firms located within Nairobi County.

1.2 Statement of the Problem

SMEs in the manufacturing sector in Kenya are facing several challenges, which, as pointed out by Gathogo (2013), include lack of innovative capacity, slowness to embrace new technology, constraints in accessing capital, and inadequate management capacity. Gathogo (2013) further posited that despite their importance to the economy, SMEs in Kenya have been performing poorly, with some having to close down due to their inability to remain competitive and profitable. In 2013, SMEs formed over 70% of the manufacturing sector in Kenya (KIPPRA, 2013), and experienced a declined growth of 3.4% in 2014, as compared to 5.6% in 2013 (the Republic of Kenya, 2015). In 2015, manufacturing SMEs' growth continued to decline to 3.1% (KAM, 2015). Further, in 2014, Kenya's manufacturing SME sector's share of exports to the global market was 0.02%, which compared unfavourably with that of South Africa at 0.03%, Malaysia at 1.3%, and Singapore at 2.4% (KIPPRA, 2014).

The 2018 economic survey of the Kenya National Bureau of Statistics (KNBS) indicated that the manufacturing sector's share of the GDP shrank from 11% in 2013 to 10% in 2014, 9.4% in 2015, 9.1% in 2016 to a further decline of 8.4% in 2017. Further, the World Bank showed that large scale manufactures operating in Kenya registered stagnation and declining profits (Otiso, 2017). A recent review of the manufacturing industry's performance from 2013-2017 indicated that manufacturing's contribution to the economy contracted more than any other industry during the five years (Kariithi & Kihara, 2017). In spite of this, there has been limited knowledge of how the performance of the manufacturing firms is influenced by various factors, hence the need to fill this knowledge gap.

Margarida, Maria, and Madalena (2016) found out that technological capabilities are a key predictor of firm performance in Iran. Agwu (2018) notes that strategic management practices have a positive association with the performance of SMEs in Nigeria. Gathungu and Baariu (2018) examined the competitive strategies, entrepreneurial orientation, and the performance of manufacturing SMEs in Kenya and indicated that being innovative, proactiveness, and macroeconomic factors positively influence firm performance. Nyikuri, Nduta and Mutua (2019) studied the influence of entrepreneurial skills and innovation on the performance of SMEs and posited that innovation, new business models, marketing capabilities, and a conducive business environment support positive performance within the firms. Wekesa and Wainaina (2016) studied the effect of firm characteristics on the performance of non-timber SMEs and indicated that managerial skills, industry experience and social skills had a positive influence on firm performance.

The above empirical studies do not focus on the effect of the combination of the three determinants, organization structure, technology capability, and management competency, on the performance of manufacturing SMEs, thus creating an empirical gap that is of interest to the current research. The research solved the empirical gap by examining those determinants of organizational performance of small and medium manufacturing firms in Nairobi County.

1.3 General Objective

The main objective was to establish the determinants of the organizational performance of small and medium manufacturing firms in Nairobi County.

1.3.1 Specific Objectives

- i. To determine the effect of organization structure on the performance of small and medium manufacturing firms in Nairobi County.
- ii. To determine the effect of technology capability on the performance of small and medium manufacturing firms in Nairobi County.
- iii. To determine the effect of management competency on the performance of small and medium manufacturing firms in Nairobi County.

1.4 Research Questions

- i. What is the effect of organization structure on the performance of small and medium manufacturing firms in Nairobi County?
- ii. What is the effect of technology capability on the performance of small and medium manufacturing firms in Nairobi County?
- iii. How does management competency affect the performance of small and medium manufacturing firms in Nairobi County?

1.5 Scope of the Study

The study contextual scope was focused on the determinants (management competency, technological capability, organization structure) and how they influence the performance of SMEs. The geographical scope of the research focused on manufacturing SMEs in Nairobi County. The theoretical scope of the research was limited to the dynamic capabilities' theory and teleological theory. Furthermore, the study used a quantitative methodology in solving the study problem.

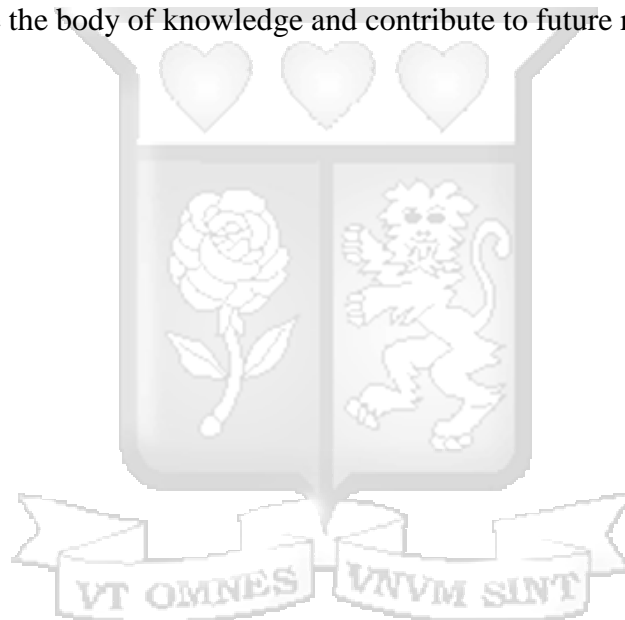
1.6 Significance of the Study

The study findings are expected to be beneficial to the County and National governments. The results of the study will be significant in highlighting the critical factors that spur the

performance of the manufacturing sector, which is a critical focus in the government's development agenda. Further, the study will be pivotal in policy formulation geared towards supporting a better business climate for SMEs.

This study will expound on the policy and practice implications for several stakeholders. To the management teams, it will enhance their decision-making capacity and support better managerial practices, geared towards performance improvements. The findings will also be beneficial to new business owners seeking to set up small businesses in the manufacturing sector, as it will highlight the critical determinants to business success.

With the scant literature focusing on the performance of manufacturing SMEs, the findings will be relevant to academia by enhancing available literature. The results of the study are also anticipated to enhance the body of knowledge and contribute to future research work.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter focuses on the review of related literature. The chapter specifically reviewed the theoretical foundations of the research, the related empirical literature, the research gaps, and provide a summary of the literature. The chapter further presented a review of the conceptual framework and the operationalization of the research variables.

2.2 Theoretical Review

A theory is a generalization about a phenomenon that explains how or why the phenomenon occurs (Avolio, Yammarino, & Bass, 2009)). The study was anchored on two theories- the dynamic capabilities theory and the teleological theory.

2.2.1 Dynamic Capabilities Theory

The Dynamic Capabilities Theory was developed by Teece, Pisano, and Shuen (1997). Teece et al. (1997) defined it as the firm's ability to integrate, build and reconfigure internal competences in order to address rapidly changing environments. It reflects a firm's ability to achieve new and innovative forms of competitive advantage, given market positions. It explains how firms must recognize, adapt and exploit critical opportunities. It shows how firms must have information processing routines, capable of recognizing, adapting and exploiting critical opportunities, which emphasizes the role of management in reconfiguring resources (Teece, Pisano, & Shuen, 2007).

Dynamic capability supersedes the capability to generate and understand the implications of market information. A firm requires dynamic capabilities to coordinate inter-functional strategy responses that reinforce competitive advantage in the market place (Jaworski & Kohli, 2013). When viewed as dynamic capabilities, individual behaviours or routines can set a benchmark for expected behaviours across the firm, in order to enhance the understanding of the competitive value of management (Inan & Bititci, 2015).

Helfat and Martin (2015) viewed dynamic capabilities like the capacity of a firm to purposefully create or modify its resource base awhile facing a constantly changing environment. Zollo and winter (2012) suggested that dynamic capability is a learned and stable pattern of collective activities, through which an organization systematically generates and modifies its operating routines in pursuit of effectiveness. Eisenhardt and Martin (2000) suggested that the functionality of dynamic capabilities can be duplicated, so that value for

competitive advantage lies in the arrangement of resources. Therefore, the dynamic capabilities are organization and strategic routines that enable firms to achieve new resource configurations as markets emerge, collide, split, evolve, and die.

However, as stated by Zahra, Sapienza, and Davidson (2006), dynamic capabilities are often operationalized in a way that makes it difficult to differentiate between their existence and their effect. Another point of criticism is that the field lacks micro-foundations that explain how individual-level abilities can be leveraged to benefit collective organization level constructs, such as organization capabilities or routines (Abell, Felin, & Foss, 2008). The literature indicates that while possessing valuable, rare, inimitable, and non-substitutable resources may be beneficial, firms also require complementary capabilities to be able to deploy available resources to match market conditions and drive firm performance (Teece, Pisano, & Shuen, 2007).

The theory was utilized in the current research to examine the influence of technology capabilities and managerial capabilities on the performance of small and medium enterprises. For many organizations, technologies are reshaping the ability to effectively compete within their chosen markets. As core to the reconfiguration processes, the dynamic capabilities theory was essential in explaining how technological capabilities can be leveraged to add business value and create competitive advantage within the firm. Further, the managerial capabilities of the SME executive team are key to repackaging and directing the internal processes; hence, the theory helped in examining their effect on organizational performance.

2.2.2 Teleological Change Theory

Teleological change theory proposes that an organization can achieve an ideal state through a continuous process of goal-setting, implementation, assessment, and restructuring (Van de Ven & Poole, 1995). Changes in organization structure and the overall flexibility of a firm are said to be the most vital factors in improving a firm's performance and ensuring its success (Tran & Tian, 2013). They are crucial to its existence because, at the initial state, departments' and job responsibilities, work content and processes, rules and regulations, communication and coordination and distribution of power are all in a nascent state (Xiuli & Juan, 2011). At the same time, to increase efficiency over time, a firm has to create and implement flexible organization structures in order to improve internal routines, such as constrained employee behaviour, high levels of formality, tight control, and top management decision making (Ahmad, 2012).

The understanding of a firm's structure emerged from the goal to create and maintain a system that is capable of dealing with the transition from just understanding risk to being able to mitigate risk, especially in relation to the human factor. Together with the main purpose of the firm, the environment of the company, filled with uncertainty and volatility, has been a determinant of the changes in the structure and attitudes of an organization (Denison, 2000).

The movement of an organization between fit and misfit leads to varying levels of performance, resulting in an increase of the contingencies, hence the need for structural changes. These strategic increases in contingencies lead to the expansion of organizations, from small start-ups to larger regional and in some cases, international levels, with larger geographic cover and diversification, hence the need for better structural alignment (Fakhar, Rana, Ayesha, & Lalarukh, 2012). The theory was relevant in the current study to determine of how organization structure influences the performance of small manufacturing enterprises in Kenya.

2.3 Empirical Review

The current section was integral in the study in reviewing the related literature concerning the research variables. The review of empirical studies helps in highlighting the various contextual and empirical gaps that the current study sought to fill.

2.3.1 Organization Structure and Organizational Performance

Wu, Hao, Kasper, and Muehlbacher (2012) studied the influence of organization structure on the performance of SMEs in Austria and China. The research adopted a survey research design and considered 90 Austrian and 71 Chinese firms. The collected data was analyzed using partial least squares and bootstrap methods. Findings indicated that organization structure has a greater effect on organization learning than on innovation in China, while in Austria, results indicated that organization structure has a positive effect on managerial and technical innovation within small firms. The study was however not conducted within Kenyan; hence, the findings may not be replicated in the current research.

Asieh (2015) investigated the relationship between organization structure and job innovation in employees of an industrial company in Iran. A sample of 313 employees of an industrial company was utilized. The findings revealed a negative relationship between centralization and innovation. High levels of centralization caused protest, disruptive approaches, and inhibited the development of new ideas. The study also indicated a negative correlation between complexity and innovation. The study further points out that the lack of employee recognition limits job innovation within the Iranian industrial firms. The study, in general, indicates that

structure is a significant predictor of job innovation. This study focused on innovation among employees, whereas the current study intends to determine the effect of organization structure on organizational performance.

Agwu (2018) conducted an analysis of the impact of strategic management on the business performance of SMEs in Nigeria. The study applied a descriptive research design, using a questionnaire, with data being collected from 120 owners of SMEs in Lagos, Nigeria. The collected data was analysed using descriptive and regression analysis. Findings indicated that structure has positive, but not significant influence on SMEs' transaction volumes. The research examined business performance using financial measures, whereas the current study assessed organizational performance using non-financial measures.

Yeboah (2015) analysed the determinants of SME growth in Ghana. The research data was gathered from administering questionnaires to 121 SMEs in the Cape Coast Metropolis. The research used descriptive statistics and the Cramer's V statistical test as the analysis techniques. The findings of the study indicated that organization structure, control and command fostered SME growth in Ghana. The study was however limited to Ghanaian general SMEs, whereas the current research examined manufacturing SMEs in Kenya.

Kihara, Bwisa, and Kihoro (2016) studied the relationship between strategy implementation and performance of manufacturing Small and Medium firms in Thika Kenya. The study was guided by a logical philosophy and relied on a mixed research methodology. The study collected research data from 115 SMEs, using self-administered questionnaires. Findings showed that structural adaptations of the SME firm are positively related to performance. Results also indicate that formalization, centralization and specialization enhance the performance of manufacturing firms. The research was conducted within the Thika municipality, whereas the current study examined SMEs within Nairobi County.

2.3.2 Technology Capability and Organizational Performance

Margarida, Maria, and Madalena (2016) examined the impact of technological capabilities on innovation and the influence of innovation on export performance. Survey data of 471 exporting manufacturing firms based in Portugal was used to test the relationship between the constructs analysed in this study. These were randomly selected from 3000 manufacturing firms. The findings demonstrated that technological capabilities have a significant effect on the intensity of organization innovation, which in turn has a positive impact on export performance.

The study focused on organization innovation, whereas the current study examined how technological capabilities influence organizational performance.

Obembe, Ojo, and Ilori (2014) evaluated the effect of technological capabilities, innovations and clustering on the performance of firms in the furniture-making industry in Southwestern Nigeria. The random sampling method was used. Primary data was obtained using structured and unstructured questionnaires. Three hundred and sixty (360) questionnaires were administered to the furniture makers. The results showed a positive impact of technological capabilities, innovations, and clustering on the performance of the firms of new furniture products. The study focussed on Nigerian furniture making firms, whereas the current research was limited to SMEs in the manufacturing sector in Kenya.

Kossai and Piget (2014) examined the adoption of information and communication technology and firm profitability in Tunisian SMEs. The study employed an econometrical analysis and focussed on 93 SMEs in Tunisia. The findings of the logistic regression showed that there is a significant statistical relationship between the level of ICT use, innovation capacity, and the performance of Tunisian SMEs. The study focused on firms within the electrical industry in Tunisia, whereas the current research focused on the manufacturing sector firms in Kenya.

Emmanuel (2017) explored the influence of entrepreneurship education, technology, and globalization on the performance of SMEs in Nigeria. The research adopted a cross-sectional research design, with data being collected using semi-structured questionnaires. The results indicated that adoption and use of technology devices and platforms, as well as globalization, enhanced productivity and profitability of SMEs in Nigeria. The research further indicated that the adoption of new innovative and modern technologies is key to enhancing the performance of SMEs. The study utilized a mixed research methodology and was conducted in Nigeria, while the current research adopted quantitative research data and was conducted in Kenya.

Sitharam and Hoque (2016) examined the factors affecting the performance of small and medium enterprises in KwaZulu-Natal, South Africa. The study utilized a cross-sectional research design, with 74 small and medium enterprises being considered in the data collection process. Findings showed that technological advancement would improve the performance of the business. The study further showed that the application of technology adoption in business management was key to fostering the performance of SMEs. The research relied on mixed data; however, the current study only utilized quantitative research data.

Njau and Karugu (2014) studied the influence of e-marketing on the performance of small and medium enterprises in the manufacturing sector in Kenya. The study utilized a survey research design, with 500 SMEs in the manufacturing industry being considered in the research. The results showed that search engine marketing, email marketing, blog marketing, and online advertising have a positive effect on business performance. The study did not take into consideration other determinants such as organization structure and management competency and their effect on organizational performance.

2.3.3 Management Competency and Organizational Performance

Jain and Moreno (2015) examined the relationship between learning, knowledge management practices, and organization performance of heavy engineering firms in India. The study focused on 205 firms and structured questionnaires were utilized to collect data. The collected data were analyzed using exploratory factor and regression analysis. Findings indicated that collaboration and teamwork, performance management, autonomy and freedom, and reward and recognition are positive indicators of firm performance. The study was confined to Indian firms, while the current study reviews the organizational performance of Kenyan SMEs.

Ogunyomi and Bruning (2016) conducted an examination of the effect of human resource management on the organization performance of small and medium enterprises (SMEs) in Nigeria. The study was conducted in survey design, utilizing 236 questionnaires and multiple regression analysis. The findings of the study indicated that human capital development and occupational health and safety had a positive effect on organization performance, while employee performance management had no direct relationship with organization performance. The study, however, did not take into consideration other determinants such as organization structure and technology capability and their influences on organization performance.

Abaho (2016) examined the effect of firm capabilities, entrepreneurial competence and performance of Ugandan SMEs. The research used a stratified sampling design and collected research data from 314 SMEs. The study utilized a mix of descriptive and inferential analysis techniques. The study findings indicated that an increase in the level of a firm's capabilities, through competent management, market linkages, and marketing capabilities, leads to enhanced SME performance. The study, however, was not conducted in Kenya; hence, the findings may not be replicated in this study.

Ahmed and Kar (2018) conducted an analysis of entrepreneurial competencies and their relationship with the performance of SME in the manufacturing sector in Ethiopia. The study

conducted survey research, focusing on managers of small enterprises within Ethiopia. The research data was collected from questionnaires. Results of the study showed that organizing, strategic intent, commitment and competencies were all significant predictors of firm performance in the manufacturing industry. The research was focused on entrepreneurial competencies and not the determinants being examined in the current study.

Njoroge and Bett (2019) studied the relationship between the operating environment and performance of small and micro enterprises in urban townships in West Pokot County, Kenya. The research adopted descriptive research with stratified random sampling. The study utilized correlation and regression analysis. The findings of the study showed that SME's owners/managers' skills and competence, technology, and competition have a significant relationship with SME's performance. The study was not limited to manufacturing enterprises, which is the focus of the current research.

Ng'aru, Muluku, and Sakwa (2018) examined the relationship between managerial competence and the growth of the top 100 enterprises in Kenya. The research focussed on mid-sized firms within the top 100 rankings, for the period 2010-2015. The sample size of the research was 164 top managers of the top 100 mid-sized companies. The results of the analysis indicated that managerial competence had a positive and significant effect on growth. Findings further indicated that knowledge, skills, behaviour patterns, and personality characteristics of the management were key determinants of performance. The study focussed on the top 100 firms, whereas the current research sampled SMEs in the manufacturing sector, operating within Nairobi County.

2.4 Summary of Literature and Research Gaps

The review of the empirical literature showed scholarly gaps that the current study sought to fill. Despite several studies focusing on the organizational performance of SMEs in Kenya, there is a dearth in literature focusing the combined effect of organization structure, technological capability and managerial competencies on organizational performance. The current research focused on solving these research gaps, as shown in table 2.1.

Table 2.1 Research Gaps

Author	Title	Research Findings	Research Gaps
Agwu (2018)	Impact of strategic management on the business performance of SMEs in Nigeria	Findings indicated that organization structure has an optimistic influence on SMEs' transaction volumes but not substantial.	The research examined business performance using financial measures, whereas the current study assessed organization performance using non-financial measures.
Asieh (2015)	Relationship between an organization structure and job innovation in employees of an industrial company	The study found out that there was a negative correlation between recognition and innovation performance	The study however, focussed on innovation among employees, whereas the current study explored how organization structure affects organization performance.
Emmanuel (2017)	Influence of entrepreneurship education, technology, and globalization on the performance of SMEs in Nigeria	The research further indicates that the implementation of new innovative and modern technologies is key to enhancing the performance of SMEs.	The study utilized a mixed research methodology, while the current research adopted quantitative research data.
Kuria (2017)	Effects of corporate income and value-added tax incentives on the performance of the export processing zone (EPZ) firms in Kenya	The findings indicated that corporate income tax incentive and VAT incentives had a positive and significant relationship with performance of EPZ firms	The study utilized secondary data to measure performance, whereas current research relied on primary quantitative data.
Ng'aru, Muluku, and Sakwa (2018)	Relationship between managerial amptitude and growth of Top 100 Enterprises in Kenya	The implementation of the analysis indicate that managerial amptitude had a optimistic and significant effect on growth	The study focussed on Top 100 firms whereas the current research sampled SMEs operating within Nairobi City County
Njoroge and Bett (2019)	Relationship between the operating environment and performance of small and micro enterprises in urban townships in West Pokot County, Kenya	Findings of the study showed that SMEs owners/managers skills and amptitude technology and competition has a significant relationship with SME performance	The study was, however not limited to manufacturing enterprises, which is the focus of the current research.

Source: Researcher (2020)

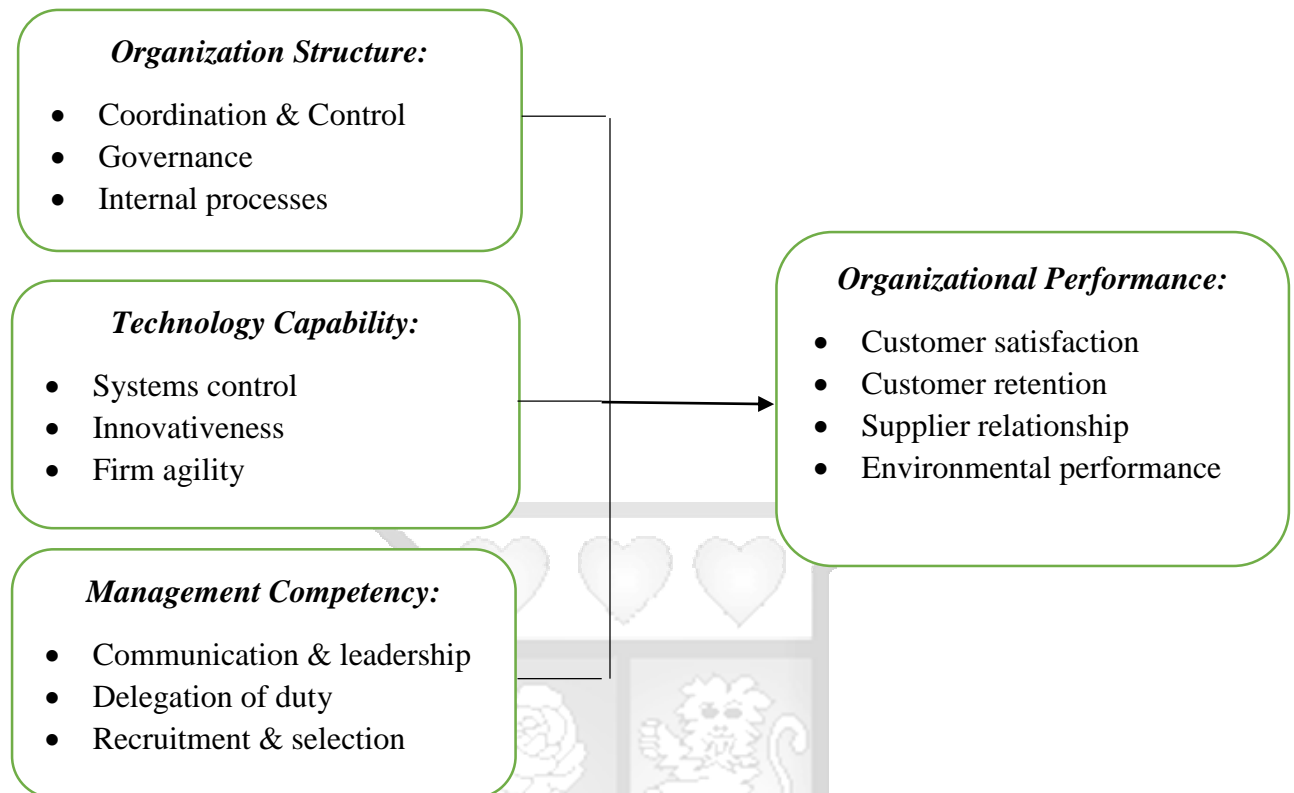
2.5 Conceptual Framework

A conceptual framework, as explained by Kombo and Tromp (2009), is an abstract or a general idea derived from specific instances. Kombo and Tromp further indicate that a conceptual framework is a set of broad concepts and values, derived from taken from relevant fields of inquiry and used to structure a subsequent presentation. Figure 2.1 shows the conceptual framework of the research.

Figure 2.1 Conceptual Framework

Independent Variables

Dependent Variable



Source: Researcher (2020)

The independent and depended variables were operationalized using the literature in chapter one, the background of the study. According to Munyoroku (2012), organization structure is the coordination and control, internal processes (the relationship between managers and their subordinates, and how job tasks are formally divided and grouped), and the governance within an organization. Ahmad et al (2019) asserted that technology capabilities of an organization can be measured in various aspects, such as innovativeness, system controls and efficiency, firm agility, technology acquiring capabilities, and technology upgrading capabilities. Basile and Faraci (2015) affirmed that the role of management competency in an organization is to ensure proper communication, effective implementation of strategies, delegation of duty, resource allocation, recruitment and selection and maintenance of beneficial relationships among all stakeholders. Mahmood & Hanafi (2013) asserted that non fiancial measures of organizational performance include, among others, customer satisfaction, customer retention, supplier relationship, and environmental performance.

The different variables were measured, as shown in Table 2.2 below:

Table 2.2 Operationalization of Variables

Variable	Indicators	Author	Data collection tool	Data analysis
Organization structure	<ul style="list-style-type: none"> • Coordination & Control • Governance • Internal processes 	Munyoroku (2012)	Structured questionnaire; 5-point Likert scale	Descriptive analysis and inferential analysis
Technology capability	<ul style="list-style-type: none"> • Systems control • Innovativeness • Firm agility 	(Ahmed et al., 2019)	Structured questionnaire; 6-point Likert scale	Descriptive analysis and inferential analysis
Management competency	<ul style="list-style-type: none"> • Communication & Leadership • Delegation of duty • Recruitment & selection 	(Basile & Faraci, 2015)	Structured questionnaire; 5-point Likert scale	Descriptive analysis and inferential analysis
Organizational performance	<ul style="list-style-type: none"> • Customer satisfaction • Customer retention • Supplier relationship • Environmental performance 	(Mahmood & Hanafi, 2013).	Structured questionnaire; 5-point Likert scale	Descriptive analysis and inferential analysis

Source: Researcher (2020)

2.6 Chapter Summary

The study focused on examining the determinants of the organization performance of Small and Medium Enterprises in the manufacturing sector in Nairobi County. It was grounded on the dynamic capabilities' theory, which anchored technological capability and management competency, which is key to reconfiguring firm resources for a competitive edge. Further, the teleological change theory helped in the examination of organization structure, which is key to aligning the firm into a high-performing system. Despite a number of studies having been conducted on the key variables of the research, none of the examined empirical studies have combined the determinants selected in this study and examined their combined effect on the organizational performance of small and medium manufacturing enterprises in Nairobi County. This creates a key empirical gap that this research study sought to solve.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology that was applied in resolving the research problem. It includes research design, target population, sampling design, and sample size, data collection instruments, and data analysis and presentation. This chapter also highlights the reliability and validity of the research and the ethical issues that were considered during this study.

3.2 Research Design

Research design is the pattern that the researcher intends to follow. It is the plan, framework, or strategy for conducting the research (Oso & Onen, 2009). This research adopted a descriptive survey research design. Descriptive research, according to Stangor (2015), seeks to obtain information that describes an existing phenomenon, by asking individuals about their implementations, attitudes, behaviours, or values. It involves collecting information without changing the environment in which the phenomenon exists. Further, descriptive research aims to answer the what, where, and when questions, but not the why and how questions (Stangor, 2015). It is an appropriate choice when the research aims to identify characteristics, frequencies, trends, correlations, and categories. This study adopted a quantitative focus, aiming to find correlational relationships between the variables. Moreover, this study utilized the survey method, which enables the researcher to gather large volumes of data, that can be analysed for frequencies, averages, and patterns (Kothari, 2013). This study was facilitated by the use of primary data.

3.3 Target Population

A target population is a well-defined set of people, elements, events, groups of things or households that are being investigated for the generalization of results (Kerlinger & Lee, 2007). According to the Kenya Association of Manufacturers (2017), there were 503 registered small and medium manufacturing firms (SMEs) within Nairobi County. SMEs are classified as firms with 1 to 50 personnel and a capital outlay of less than kshs.5,000, 000. This study considered these 503 firms to be a good representation of all the small and medium manufacturing firms in Kenya.

Table 3.1 Target Population

Manufacturing Sub-Sector (SME)	Percentage of firms	Number of firms
The building, mining and construction	3%	15
Chemical and allied	9%	46
Energy, electrical and electronics	5%	26
Food and beverages	22%	113
Leather and footwear	1%	1
Metal and allied	9%	46
Automotive	6%	31
Paper and Board	8%	41
Pharmaceutical and medical equipment	3%	15
Textiles and apparel	7%	36
Plastic and Rubber	3%	15
Services and consultancy	10%	51
Timber, wood, and furniture	2%	10
Agriculture and food processing	1%	1
Essential services (auxiliary)	11%	56
Total Target Population	100%	503

Source: KAM Member Categorization (2017)

3.4 Sampling Design and Sample Size

In sampling, some elements are selected from the actual population as a representation. This representation should be large enough to detect a significant effect (Kerlinger & Lee, 2007). A sample frame is a list of the population elements, from which the sample is drawn to represent the target population (Saunders, Lewis, & Thornhill, 2009). The sample frame for the study was the registered manufacturing firms in Nairobi County.

A sample size is a proportion of the subjects of the study, used to represent the whole population (Cooper & Schindler, 2008). The research applied the Yamane formulae to calculate the sample size from the 503 firms, at a 5% estimation error, as shown below:

$$n = \frac{N}{1 + N(e^2)}$$

Where: n is the sample size, e is the error term, and N is the total target population

$$N = 503$$

$$nf = \frac{503}{1 + 503 (.05*.05)} = 223 \text{ respondents}$$

The sample size for the research was 223 respondents (management personnel) who were apportioned, as shown in Appendix III. The study conducted a census sample of all the respondents.

3.5 Data Collection Instruments and Procedures

Saunders (2011) noted that data collection involves the technique of gathering data to achieve research goals. This study collected primary data using a questionnaire as the research instrument. The questionnaire was developed from literature review to ensure that it remained relevant to the research problem. The use of questionnaires was preferred because it allowed the researcher to collect data from a wide geographical area at a relatively low cost. It was also free from unfairness and guaranteed non-disclosure of the respondent's identity. The study relied on a structured questionnaire, with the questions formulated using a 5-point Likert Scale. The questionnaire was distributed to the selected 223 managers of small and medium manufacturing firms in Nairobi County.

Research procedures are the step by step processes that guide a researcher on how to conduct the study or how to collect data for the study (Saunders, 2011). Prior to data collection, an introduction and authorization letter was obtained from Strathmore University. Further, a research permit was sought from the National Commission for Science Technology and Innovation (NACOSTI) to supplement the research license. The research adopted a drop and pick technique, which enhanced convenience in the data collection process. Additionally, the research assistants employed in the data collection process were briefed on the aspects and aims of the study.

3.6.1 Reliability of Research Instrument

To measure the reliability of the questionnaire, the Cronbach's alpha statistic was calculated for the Likert scale questions. Cronbach's alpha statistic is between 0 and 1. The closer the Cronbach's alpha is to 1, the better the reliability of the questionnaire. This is because a high alpha is caused by a high variance, which means that there is a wider variance of the responses, which makes it easier to differentiate amongst responses (Golafshani, 2013). Reliability is the degree of consistency in the results after repeated attempts. Babbie (2010) provides the

following rules of thumb: >0.9 – Excellent, >0.8 – Very Good, >0.7 – Good, >0.6 – Acceptable, >0.5 – Poor and <0.5 – Unacceptable. The study adopted all indicators with Cronbach alpha of over 0.7.

Table 3.2 Reliability Statistics

Variable	Cronbach's Alpha	Number of Items	Comment
Organization performance	.840	6	Accepted
Organization structure	.785	6	Accepted
Technological capability	.860	6	Accepted
Management competency	.835	6	Accepted
Overall Reliability Statistics	.820	4	Accepted

Source: Researcher (2020)

The results of the analysis indicated that all the research variables had a Cronbach Alpha of above 0.7, which shows that there was consistency within the research instrument. The overall reliability statistics were 0.820, which was above the threshold of 0.7; hence, the constructs were accepted for and utilized in the study.

Additionally, before the study was carried out, a pilot study of 10% of the sampled respondents (23 SME managers) was conducted. The essence of conducting a pilot study is to test the data collection methods, the applicability of research design, test sampling method and above all, ensure that the instrument is reliable (Oso & Onen, 2011). Piloting is also conducted to review the appearance, clarity, readability, ease of understanding and wording of the research questions (Babbie, 2010).

3.6.2 Validity of Research Instrument

Validity is the degree to which an instrument measures what it claims to measure (Golafshani, 2013). The validity of instruments depends on the ability and willingness of the respondents to avail the required information (Sekaran & Bougie, 2009). The study used content and construct validity. Content validity seeks to assess the quality of all measurement items, which must be established prior to any hypothetical (Golafshani, 2013). The content validity was conducted with the assistance of the supervisor in developing the research instrument and ensuring the

instrument is aligned with the study content. Construct validity ensured that all the indicators of the research were incorporated into the research instrument.

3.7 Data Analysis and Presentation

The quantitative data was analysed using descriptive analysis and inferential analysis techniques, with the help of Statistical Packages for Social Sciences (SPSS). The descriptive analysis included means and standard deviations. Inferential statistics included multiple regression and correlation analysis to estimate the level of association between the research variables. The regression model was tested at a 5% significance level. The analysed data was presented using charts and tables, as well as other infographics deemed appropriate. The regression equation was as follows;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where;

Y = Dependent variable (organizational performance of manufacturing SMEs in Nairobi County)

α = the model intercept

β_{1-4} = Coefficient of independent variables

X_1 – organization structure

X_2 – technological capability

X_3 – management competency

ε = Error Term

3.8 Ethical Considerations

The study ensured that appropriate ethical guidelines were adhered to throughout the conduct of the research. Prior to undertaking the study, the researcher ensured that clearance was sought from Strathmore University Ethical Committee. The study further ensured that a research permit was sought from the National Commission for Science Technology and Innovation (NACOSTI). The researcher also sought consent from the participants and included an introduction section, which assured the respondent that the research was for educational purposes. Lastly, the researcher ensured that confidentiality and anonymity of the respondents were maintained throughout the research work.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

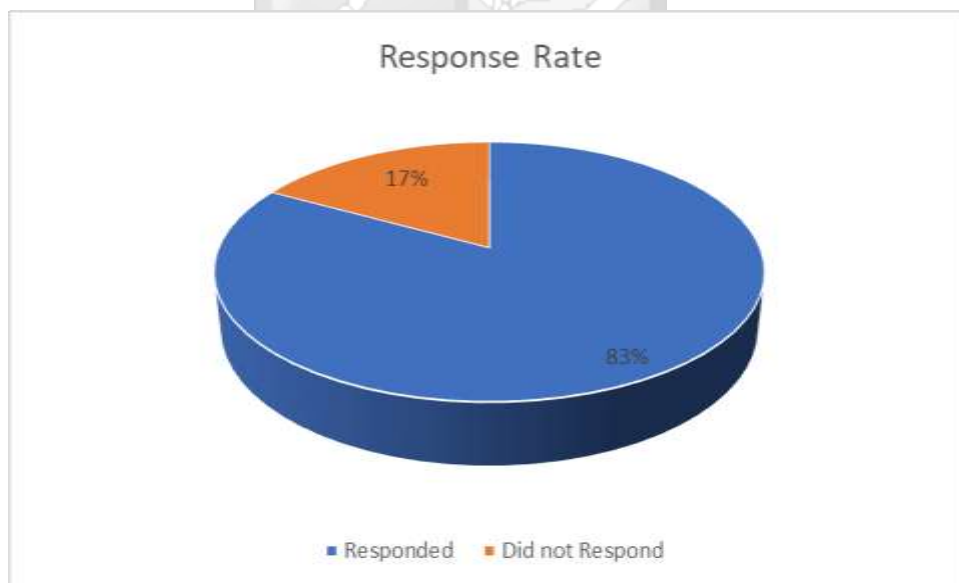
4.1 Introduction

This study sought to determine the effect of organization structure, technology capabilities and management competency on organizational performance of small and medium manufacturing firms in Nairobi County. This chapter presents the research findings, after the analysis of the collected data. The chapter specifically presents the response rate, the demographic information of the respondents, the descriptive analysis, and the regression and correlation analysis, in line with the research objectives.

4.2 Response Rate

Using a structured questionnaire, this study aimed to collect research data from a sample of 223 managers of SMEs in the manufacturing sector within Nairobi County. The study was able to obtain 185 completed questionnaires, which is an 83% response rate, as shown in Figure 4.1. This was deemed adequate for statistical analysis. Kothari (2013) indicates that a response rate of above 60% of the sample respondents is more than adequate for the generalization of the findings to the overall sample.

Figure 4.1 Response Rate



Source: Researcher (2020)

4.3 Demographic Information

The study further investigated the demographic profile of the respondents. The findings were grouped according to the respondents' age, education, number of employees in the firm, and the length of service experience. The results are presented in the tables below.

4.3.1 Age of the Respondents

The study sought to determine the age distribution of the respondents. The findings of the analysis are shown in Table 4.1 below.

Table 4.1 Respondents Age

	Frequency	Per cent
18-25 years	41	22.2
26-33 years	80	43.2
34-41 years	40	21.6
42-49 years	16	8.6
50 years and above	8	4.3
Total	185	100.0

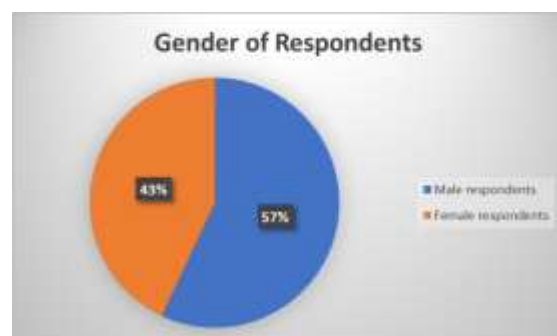
Source: Researcher (2020)

Results showed that 43% of the respondents were between the age of 26-33 years, and only 4% were aged 50 years and above. This indicates that there is an increased presence of youth employees and an increased value of creating employment for the youth within the SME sector. The respondents were in managerial roles, which could indicate the entrepreneurial and managerial development of the youth within the sector.

4.3.2 Gender of Respondents

The study further sought to examine the gender distribution among the respondents. The results are presented in Figure 4.2.

Figure 4.2 Respondents Gender



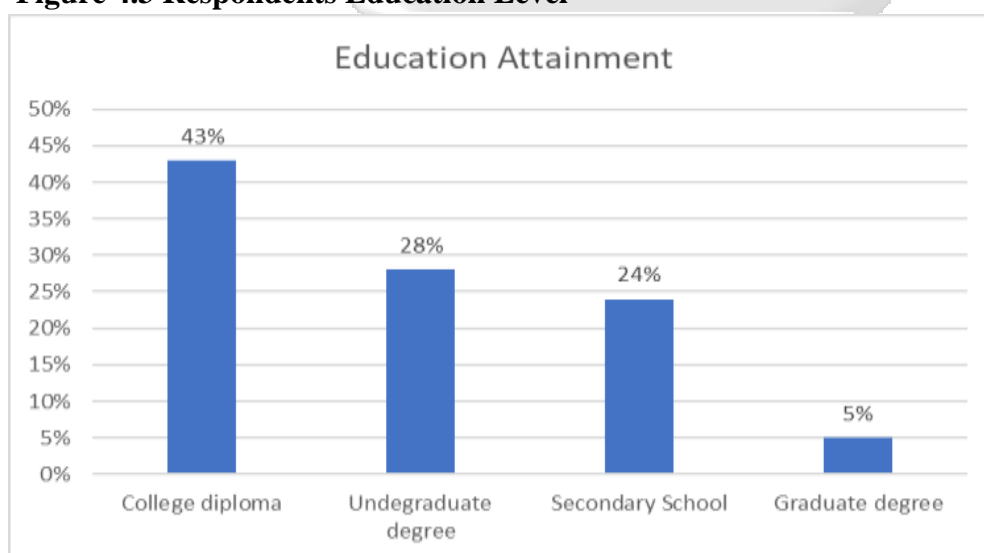
Source: Researcher (2020)

The data revealed that 57% of the respondents were male, while 43% of the respondents were female. Although there is almost a gender balance in the management of SMEs in the manufacturing sector in Nairobi County; there is a need to advocate for more females in managerial roles in the SME sector.

4.3.3 Highest Education Level

The research was also interested in examining the level of educational attainment among the respondents. Figure 4.3 show that 43% of the respondents had a college diploma, 28% had an undergraduate degree, 24% had secondary school certification, and only 5% had a graduate-level degree. This indicates that there is emphasis on high education attainment among managers of small and medium enterprises in Nairobi County.

Figure 4.3 Respondents Education Level



Source: Researcher (2020)

4.3.4 Number of Employees

The research also sought to establish the organization size in terms of the number of employees of each SME. The results are shown below in table 4.2.

Table 4.2 Number of Employees

Organization Size	Frequency	Per cent
0-20 employees	57	30.8
21-50 employees	103	55.7
Over 51 employees	25	13.5
Total	185	100.0

Source: Researcher (2020)

The results indicated that 56% of the firms have between 21-50 employees and only 13% of the firms had over 51 employees. This shows that majority of the sampled firms were operating as the classification of small and medium, with a personnel size of less than 50.

4.3.5 Organization Age

The research further sought to establish the age of the sampled small and medium enterprises. The findings are presented in the table below:

Table 4.3 Age of the Organization

Organization Age	Frequency	Per cent
1-3 years	27	14.6
4-6 years	59	31.9
7-9 years	69	37.3
Over ten years	30	16.2
Total	185	100.0

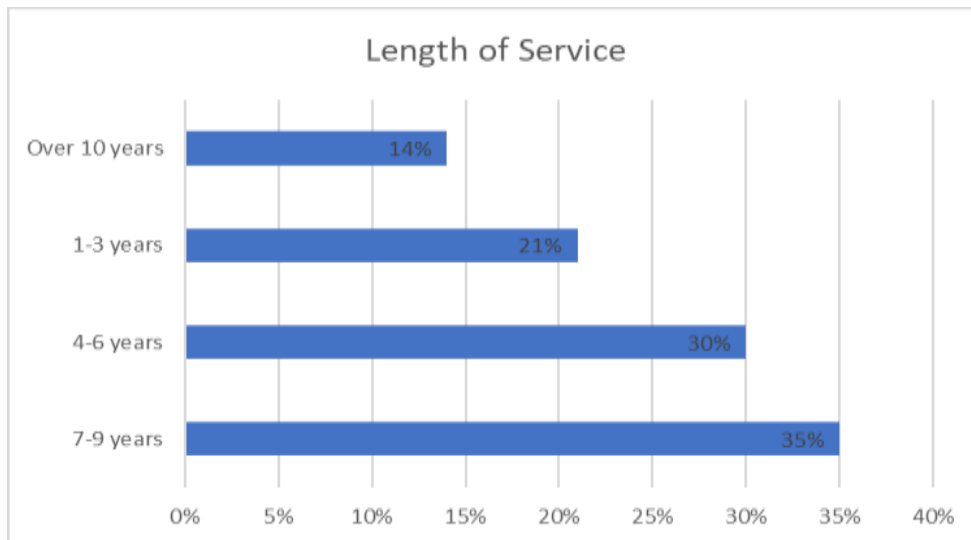
Source: Researcher (2020)

The research findings revealed that 37% of the firms have been in operation for a period of 7-9 years. This was followed by firms who have been in operation for a period of 4-6 years at 32% and only 16% have been in existence for more than 10 years. This indicates an increased resilience of SMEs within the manufacturing sector in Nairobi County; which can partially be attributed to the boom in infrastructural development in the county in the past decade. However, the low number of firms that have been in operation for over 10 years shows that there is still a need for government and private sector intervention to ensure the longevity of SMEs.

4.3.6 Length of Service in the Manufacturing Sector

The last demographic information examined was the length of service of the respondents in the manufacturing sector. Figure 4.4 shows that majority of the respondents, 35%, have worked in manufacturing for 7-9 years; 21% have worked in the sector for less than 3 years, and 14% of the respondents have over 10 years of experience in the sector.

Figure 4.4 Respondents Length of Service



Source: Researcher (2020)

The findings indicate that the respondents, as managers, have a wealth of experience in manufacturing, which is vital to management competency, one of the variables being determined in the research.

4.4 Descriptive Analysis

The study sought to determine how the three determinants, organization structure, technology capability, and management competency affected the performance of small and medium enterprises (SMEs). The study relied on descriptive and inferential analysis. For the descriptive data, respondents were asked to indicate their level of agreement or disagreement by answering questions which were formulated using a 5-point Likert Scale. The data was analysed using means and standard deviations. The interpretation of the means was; 0-1.5 was strongly disagree; 1.51-2.5 was disagree; 2.51-3.50 was moderately agree; 3.51-4.5 was agree; and finally, 4.51-5 was strongly agree.

4.4.1 Organization Structure

The first research objective was to determine the effect of organization structure of the firms on the performance of small and medium manufacturing firms in Nairobi County. The findings are presented below in table 4.4.

Table 4.4 Descriptive Implementation for Organization Structure

Descriptors	Mean	Std. Deviation
There is increased firm coordination towards the attainment of organization goals	3.7351	1.04783
There are control and command within the organization which improves firm performance	3.5243	1.09381
There is employee collaboration within the firm towards achieving organization goals	3.5730	1.16392
The firm has achieved implementation of governance practices	3.5568	1.12688
The firm has adopted internal processes geared towards promoting firm performance	3.5135	1.12341
There is firm coordination with the external stakeholders	3.4000	1.09941

Source: Researcher (2020)

Findings show that the statement with the highest mean of 3.7351 and lowest standard deviation of 1.04783 was that there is increased firm coordination towards the attainment of organization goal. Further, respondents agreed that there is employee collaboration within the firm towards achieving organization goals, as shown by a mean of 3.5730, however there was high variation of 1.16392. The statement with the lowest mean of 3.4000 was that there is firm coordination with the external stakeholders. The deduction from these results could be that the structures put in place to coordinate the operations of the firms are not fluid enough to allow for more employee collaboration. Additionally, the findings indicate that SMEs need to work on bettering their coordination with external stakeholders, especially those who directly impact firm performance, such as suppliers, policy makers, etc.

4.4.2 Technology Capability

The second research objective was to determine the effect of technology capability of the firms on the performance of small and medium manufacturing firms in Nairobi County. The findings are presented below in table 4.5.

Table 4.5 Descriptive Implementation for Technology Capability

Descriptors	Mean	Std. Deviation
The firm adopted modern systems for its operations	3.6703	.91748
Innovative practices are encouraged and adopted within the firm	3.2595	1.11693
The implementation of new technologies has enhanced the firm's agility	3.7135	.99405
Implementation of technology has led to the development of new services and the formation of new alliances	3.4649	1.06837
The firm employees are well conversant and have high technological expertise	3.4595	1.16083
The organization can lead and keep up with technological changes in the industry	3.5676	1.10681

Source: Researcher (2020)

The findings show that the highest consensus among the respondents was that the adoption of new technologies has enhanced the firms' agility, as indicated by mean of 3.7135. Further, there was agreement among respondents that the firms have adopted modern systems for their operations, as indicated by mean of 3.6703 and the lowest standard deviation of 0.91748. The lowest consensus among respondents was in regards to the encouragement and adoption of innovative practices within the firm, as noted by a mean of 3.2595 and a standard deviation of 1.11693. It was abovementioned that over 60% of the sampled firms were 4 years or older. These descriptive results could be attributed to the fact that as small and medium firms grow, they tend to adopt new technologies for their operations and focus on agility as a way to differentiate themselves and grow and expand. However, results also indicate that management of these SMEs need to encourage and provide space for their employees to be innovative. This practice could greatly impact organization performance.

4.4.3 Management Competency

The third research objective was to determine the effect of management competency on the performance of small and medium firms in Nairobi County. The findings are presented below in table 4.6.

Table 4.6 Descriptive Implementation for Management Competency

Descriptors	Mean	Std. Deviation
The firm has put in place effective leadership practices	3.7892	.98571
The firm's leadership has an effective communication and feedback system	3.5568	1.04167
There is an increased delegation of duties by the management of the firm	3.5135	1.17542
There are better recruitment and selection process within the firm	3.5351	1.16101
The management can form strong social network ties with employees, other stakeholders, and customers	3.4216	1.13039
Managers in our company can have good relationships with other business contact persons	3.3838	1.08786

Source: Researcher (2020)

The findings show that the statement with the highest mean of 3.7892 and lowest standard deviation of 0.98571 was that the firms have put in place effective leadership practices. There was almost equal, in terms of means, agreement among respondents that the firm's leadership has an effective communication and feedback system; has increased delegation of duties; and has better recruitment and selection process. The lowest consensus among the respondents, with a mean of 3.3838, was the managers' abilities to form good relationships with other business contact persons. These results indicate that managers of SMEs need to work on building better relationships with other stakeholders and business contact persons.

4.4.4 Organizational Performance

The organizational performance of the manufacturing SMEs was the dependent variable. The findings are presented below in table 4.7.

Table 4.7 Descriptive Implementation for Organization Performance

Descriptors	Mean	Std. Deviation
The firm has been able to increase customer satisfaction since inception	4.0865	.86796
The firm has been able to foster customer retention	3.7946	1.02733
The firm has been able to maintain a good relationship with its suppliers	3.7405	1.06716
The firm has been conscious of the environmental impact of its operations	3.4811	1.13775
The firm has attained growth in its operational revenues through better management	3.5514	1.21977

Source: Researcher (2020)

Findings show that the highest consensus among respondents, with a mean of 4.0865 and the lowest standard deviation of 0.86796, was that the firm has been able to increase customer satisfaction since inception. Further, findings show moderate agreement among respondents in regard to the firm consciousness of the environmental impact of its operations, with the lowest mean of 3.4811. The highest standard deviation among respondents' answer was that of the statement that the firms have been able to attain growth in its operational revenues through better management. The results indicate that although these SMEs have been able to increase customer satisfaction, there is still a need for their management to ameliorate in other areas of operations, which will greatly and positively affect organization performance.

4.5 Inferential Statistics

Inferential statistics were used to analyse the relationships between the variables and answer the research questions of the study. Pearson correlation and regression analysis tests were used.

4.5.1 Correlation Analysis

The study sought to determine the association between the predictor variables, organization structure, management competency, technology capability and the organizational performance of SMEs. The correlation of the variables was tested using the range -1 to +1. -1 indicates perfect negative correlation, whereas +1 indicates a perfect positive correlation. 0 is an indication of no correlation at all. Results are presented below in table 4.8.

Table 4.8 Summary Correlation Results

		Organization performance
Organization structure	Pearson Correlation	.703**
	Sig. (2-tailed)	.000
	N	185
Technology capability	Pearson Correlation	.600**
	Sig. (2-tailed)	.000
	N	185
Management competency	Pearson Correlation	.437**
	Sig. (2-tailed)	.000
	N	185

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Researcher (2020)

The correlation matrix was used to determine the extent to which changes in organization structure contributed to changes in organizational performance. The findings show $P=.703$, $Sig .000<.05$. This is a significant and positive association between organization structure and

performance of small and medium enterprises. For a variable to be significant, its p-value should be less than 0.05.

Secondly, findings showed a significant and positive association between technology capability and organizational performance, with $P=.600$, $Sig .000<.05$. Lastly, the matrix showed a significant and positive association between management competency and organizational performance, with $P=.600$, $Sig .000<.05$.

4.5.2 Regression Analysis

The study further adopted a multiple linear regression analysis to examine the magnitude of the relationship between the dependent and independent variables of the study. It helped to determine the influence of organization structure, technology capability, and management competency, on organization performance. The regression analysis was done using SPSS. The findings are presented below, starting with the regression summary, the ANOVA analysis and finally, the regression coefficients.

The results of the regression summary are presented below in table 4.9.

Table 4.9 Regression Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.715 ^a	.511	.503	3.53506

a. Predictors: (Constant), Management competency, Organization structure, Technology capability

Source: Researcher (2020)

The regression findings show a $R^2 = .511$. R Squared explains the extent of which the variability of the dependent variable is explained by the independent variables. This means that 51.1% variations in the performance of the SMEs was explained by the three determinants. The R squared was adjusted to 50.3%. This indicates that, 50.3% of the total variability of the organization performance was accurately explained by the three determinants. Further, the R value is 0.715. The R value explains how well the whole model describes the data. In this study, the model explained 71.5% of the data.

Additionally, the study conducted an analysis of variance (ANOVA). This analysis explains the significant p-value. P-values inform us if the model was statistically significant and if it should be accepted or rejected. If the P-value or significance is less than 0.05, then the model is statistically significant. The findings are shown in table 4.10.

Table 4.10 ANOVA Summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2364.091	3	788.030	63.059	.000 ^b
	Residual	2261.888	181	12.497		
	Total	4625.978	184			

a. Dependent Variable: Organization performance

b. Predictors: (Constant), Management competency, Organization structure, Technology capability

Source: Researcher (2020)

The results of the ANOVA analysis indicate that the model was statistically significant, as shown by the F-value of 63.059 and a significance of .000<.05. This shows that the model was fit in predicting the relationship between the research variables.

The regression coefficients are shown below in table 4.11;

Table 4.11 Regression Coefficients

Model	Unstandardized		Standardized		Sig.
	B	Std. Error	Beta	t	
1 (Constant)	7.249	1.203		6.026	.000
Organization structure	.526	.071	.574	7.461	.000
Technology capability	.134	.091	.136	1.476	.002
Management competency	.052	.064	.058	.812	.000

a. Dependent Variable: Organization performance

Source: Researcher (2020)

The overall regression model of the study is;

$$Y = 7.249 + .526X_1 + .134X_2 + .052X_3 + 1.203$$

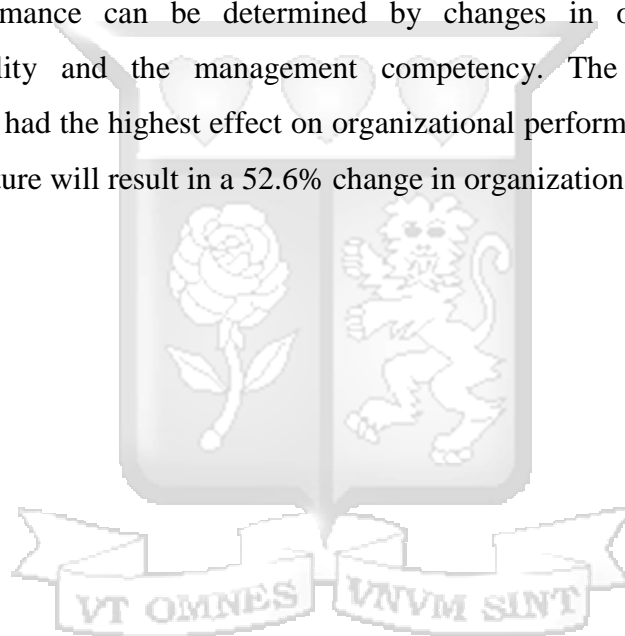
The B value of 7.429 is a constant value of organizational performance when all determinants are equal to zero. The model indicates that organization structure has a significant effect on performance; a unit change in organization structure will result in .526-unit or 52.6% change in performance, $sig = .000 < .05$, when other variables are held constant.

Further, the model indicates that both technology capability and management competency have a positive effect on performance. A unit change in technology capability will result in 13.4% change in performance, $sig = .002 < .05$, and a unit change in management competency will

result in 5.2% change in performance, $sig = .000 < .05$, when other variables are held constant. Among the three determinants, organization structure had the highest impact on organizational performance, followed by technology capability, and lastly, management competency.

4.6 Chapter Summary

This chapter focussed on the presentation of the findings of the study. The findings were presented in order of the analysis conducted, in line with the research objectives. The analysis relied on descriptive analysis and inferential analysis, mainly Pearson correlation test and regression analysis. The overall regression results indicated that there was a positive and significant association among the three determinants and organizational performance. Additionally, regression results indicated that 51.1% ($R^2 = .511$) of the changes in organizational performance can be determined by changes in organization structure, technological capability and the management competency. The results showed that organization structure had the highest effect on organizational performance. A unit change in the organization structure will result in a 52.6% change in organizational performance.



CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

The purpose of the study was to determine the influence of organization structure, technology capability and management competency on organization performance. This chapter presents the summary, conclusions, and recommendations drawn from the study. The chapter will further present suggestions for further research, which will enhance the body of knowledge.

5.2 Summary

Small and Medium Enterprises (SMEs) are key contributors to the GDP and employment creation in a country. As a result, many scholars and policymakers have increased their interests in understanding what affects the performance of these SMEs. This study examined the determinants of the organizational performance of SMEs in the manufacturing sector in Nairobi County. The study was grounded on the dynamic capabilities' theory and the teleological change theory. The dynamic capabilities theory enabled the study to better understand how technological capabilities and management competencies can be utilized by SMEs to improve their performance. The teleological change theory was useful in expounding on the role that organization structure plays towards fostering performance of the SMEs.

The research adopted a quantitative descriptive approach and utilized a structured questionnaire to collect data. The questionnaire was distributed to 223 managers, the respondents of the study, of the sampled SMEs in the manufacturing sector in Nairobi County. The study employed both descriptive and inferential analysis.

The study was able to obtain an 83% response rate, with 57% of the respondents being male. The demographic results further indicated that 56% of the SMES had a workforce of 21-50 employees; that over 60% of the organization have been in business for 4 years or more; and that 65% of the respondents had served within the SME and manufacturing sectors for between 4 and 9 years.

Findings showed that a change in organization structure had the highest effect on organizational performance of the manufacturing SMEs in Nairobi County. The descriptive statistics revealed that the statement with the highest mean of 3.7351 and lowest standard deviation of 1.04783 was that there is increased firm coordination towards the attainment of organization goal. The correlation analysis showed a positive and significant association between organization structure and performance and the regression analysis indicated that a unit change in

organization structure will result in a 52.6% change in performance, when other variables are held constant.

In regards to technology capability, descriptive analysis revealed that the highest consensus among the respondents was that the adoption of new technologies has enhanced the firms' agility, as indicated by mean of 3.7135. The correlation analysis showed a positive and significant association between technology capability and performance and the regression analysis indicated that a unit change in technology capability will result in a 13.4% change in performance, holding other variables constant.

A change in management competency had the lowest effect on performance. Regression results showed that a unit change in management competency will result in a 5.2% change in performance. Additionally, descriptive results showed that the statement with the highest mean of 3.7892 and lowest standard deviation of 0.98571 was that the SMEs have put in place effective leadership practices. Lastly, correlation analysis showed a positive and significant association between management competency and organization performance.

The study also examined the overall relationship between organizational performance and organization structure, technology capability, and management competency. The findings of the regression analysis showed that 51.1% ($R^2 = .511$) variations in the performance of the SMEs were predicted/affected by organization structure, technology capability and management competency.

5.3 Discussion of Findings

This section discusses the major findings of the study, in line with the research objectives and how the findings relate to the literature review.

5.3.1 Organization Structure

The first research objective was to determine the effect of organization structure on performance. The findings showed that organization structure had the most influence on organization performance. This is in line with the teleological change theory, which states that changes in organization structure and the overall flexibility of a firm are said to be the most vital factors in improving a firm's performance and ensuring its success (Tran & Tian, 2013).

The results indicated that there has been increased firm coordination towards the attainment of organization goals. This result supports previous research on the importance of firm structure

and coordination. Gathungu and Baariu (2018) noted that coordination and entrepreneurial orientation positively enhances firm performance.

The research further indicated that most respondents agreed that there had been improved command and control within their organizations. The positive effect of command and control on performance is supported by Yeboah (2015), who indicated that organization structure, command, and control positively improve the growth of SMEs. Additionally, Njoroge and Bett (2019) noted that centralization and formalization of small business will be key to market expansion, product development and innovative capacity.

5.3.2 Technological Capability

The second objective of the study was to determine the effect of technology capability on performance. Technology capability had a significant, though low, effect on performance. The research results indicated high consensus among respondents that their organizations have adopted modern systems for their operations and that this adoption of new technologies has enhanced the organization's agility. This is in line with the dynamic capabilities' theory, which was utilized in the study. The theory asserts that firms must have the ability to achieve new and innovative forms of competitive advantage, by putting in place information processing routines and systems, capable of recognizing, adapting and exploiting critical opportunities.

Findings showed that the lowest consensus among respondents was that innovative practice are encouraged within the firms. This can negatively impact organizational performance because innovation is crucial to performance. Margarida, Maria and Madalena (2016) found that increased innovation intensity positively improved performance within manufacturing firms. Kossai and Piget (2014) note that ICT usage and innovation capacity enhanced the performance of small and medium firms. Nyikuri, Nduta and Mutua (2019) concluded that innovation positively improves the performance of small and medium enterprises.

5.3.3 Management Competency

The final objective of the study was to determine the effect of management competency on performance. Management competency had the lowest effect on organizational performance. Findings showed high consensus among the respondents that their firms have put in place effective leadership practices. The influence of leadership practices on performance was echoed by Sullivan (2011), who noted that the firm management team is instrumental in fostering the firm's direction, goal setting, and implementation of effective plans within the firm.

There was almost equal agreement among respondents that their firms have an effective communication and feedback system, increased delegation of duties, and has better recruitment and selection process. Basile and Faraci (2015) indicated that managerial competency is instrumental in improving communication, strategy execution and inter-business relationship within firms.

The lowest consensus among the respondents was the managers' abilities to form good relationships with other business contact persons. For continued growth and development of SMEs, it is very important for management to form and maintain strategic business relationships. Simon, Bartle, Stockport, Smith and Klobas (2015) asserted that management capabilities play a key role in enhancing business relationships. Ng'aru, Muluku and Sakwa (2018) further noted that managerial competence has a positive and significant effect on the growth of small and medium enterprises.

5.4 Conclusions

This study presented a review of the literature on the determinants of organizational performance. There are many determinants, both financial and nonfinancial, of performance. The study focused on organization structure, technology capability and management competency and aimed to determine their effect on organization performance. The findings showed a significant and positive association between organization structure and performance of the small and medium enterprise. The study concludes that improved coordination, command and control within a small and medium manufacturing enterprise will improve performance and contribute to growth. However, the management of SMEs needs to ensure that there is flexibility and fluidity in the organization structure, which will allow for more employee collaboration. Organization structure had the highest effect on the performance of SMEs in the manufacturing sector in Nairobi County; therefore, the management of these SMEs need to invest in continuous restructuring and formalization of their organizations.

In regards to the effect of technology capability on organizational performance of the SMEs; findings showed a positive association. The research concludes that adoption of new technologies enhanced the SMEs' agility. The research also showed that management needs to encourage its employees to be innovative, in order to improve performance and foster growth.

Management competency had the least effect on organizational performance. The research concludes that although the SMEs have put in place effective leadership practices, which have improved communication, enhanced delegation of duties, and improved the recruitment and

selection processes; management needs to work on forming and strengthening strategic business relationships with customers and other stakeholders. The low emphasis on these external relationships could be attributed to the fact that in the development and growth stages of SMEs, management tends to focus more on internal matters rather than external matters. However, seeing how SMEs in Nairobi County are fighting for longevity, management needs to work on strengthening these external relationships.

5.5 Recommendations

The study revealed that organization structure had the most effect on performance. Therefore, the following are the study's recommendation to the management of small and medium firms in Nairobi County. First, substantial investments should be put in the structuring and formalization of their organizations. The focus should be on putting in places proper processes, improving command and control, and enhancing internal and external coordination within the firm.

Second, collaboration among employees of the SMEs should be fostered. At the beginning of most SMEs, management tends to wear many hats because of the financial situation of the organization. As a result, each employee tends to solely focus on his or her own tasks and management, being overwhelmed by the different hats, forgets to take the time to communicate collaboration. Employee collaboration ensures that everyone operates as a unit, which not only improves performance, but also improves efficiency and effectiveness.

Thirdly, management should encourage all cadres of employees to be highly innovative and technologically savvy. In the current era of globalization, local manufacturers are facing intense competition from cheaper imports. Technology has proved to be a competitive advantage tool, which provides an organization with the ability to respond to the rapid market changes. This is crucial for growth and business sustainability. Innovation should be one of the priorities in the organizations' strategies.

Lastly, management should focus on forming and strengthening strategic alliances and business relationships with external stakeholders. Specifically, managers should focus on relationships with suppliers and policy makers. Good relationships with suppliers contribute to better streamlining of the supply chain, which leads to better cost controls. Coordinating well with policymakers will give the SMEs the ability to participate in the formation of policies, which can significantly and positively affect their performance.

The study also recommends that policymakers in Kenya should ease the process of company formation and structuring. The findings showed that the SMEs had implemented government practices and the Country and National governments should continue to formulate new and improve old policies to create a conducive environment for SMEs to do business and thrive.

The study's final recommendations are to new business owners who wish to enter the manufacturing sector in Nairobi County. First, before beginning operations, there should be structures and processes, specifically operational manuals and plans, put in place, detailing how the business will be conducted. Many new business owners tend to dismiss this step. Second, the management team should be selected meticulously, focusing on the experiences, leadership skills, and management competencies of each personnel. Lastly, no matter how small, new business owners should invest in the integration of technology in their business.

5.6 Limitations of the Study

The current research was based on a sample of SMEs in the manufacturing sector in Nairobi County. The scope was within the manufacturing sector and in Nairobi county, and therefore, it may not be possible to generalize the study's findings to other SMEs, in different sectors of the economy and/or different counties.

Secondly, due to limited time and budget, the researcher was not able to obtain responses from all the registered SMEs in the manufacturing sector in Nairobi County. A sample was determined and even still, the researcher was not able to gain responses from all the sampled managers. There was some unwillingness to respond to the questionnaires from some of the respondents.

Lastly, organizational performance can be measured in copious ways. The study focused on three nonfinancial determinants: organization structure, technology capability and management competency. This restricted the data collected and discussions to these determinants, yet there other nonfinancial and financial factors which affect the performance of SMEs.

5.7 Suggestions for Further Research

The study relied on a descriptive research design. Although this research design enabled the generalizations of the findings, it prevented deeper exploration of some aspects of the relationships in the study. Future research should, therefore, explore how and why these determinants affect organizational performance.

Second, the study focused on how each determinant affected performance, holding other variables constant. It would be informative to see how the research variables affect one another and how they relate when other measures of performance are assessed.

Lastly, many researchers across the world have investigated how taxation and government policies impact the performance and growth of SMEs. In Kenya, National and County government design policies and regulations that have a direct effect on the operations of SMEs in the manufacturing sector, which influences their performance. The study suggests that further research should explore how tax incentives, tax policies, and business regulations influence the performance of small and medium manufacturing firms in Nairobi County.



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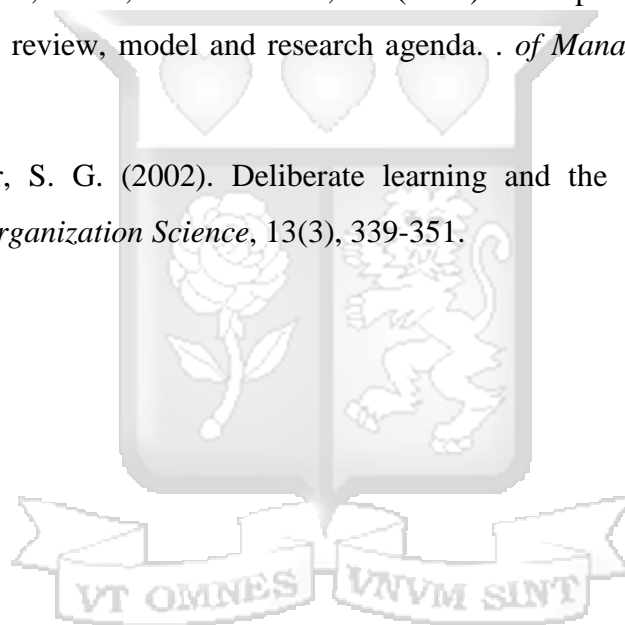
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APPENDICES

Appendix I: Introduction Letter

To the Managing Director

.....

RE: REQUEST TO COLLECT DATA FOR ACADEMIC RESEARCH

My name is Delphine Uwase, and I am a student in the Masters of Business Administration for Executives program at Strathmore University Business School. As a requirement for the award of my academic degree, I am required to undertake a research study that will foster practice and policy within my area of study. To this end, I am conducting a study on the ‘*The Determinants of Organizational Performance of Small and Medium Enterprises in the Manufacturing Sector in Nairobi City.*’

As part of the SMEs in the manufacturing sector in Nairobi County, your firm has been selected to participate in the current study. Any assistance offered in the collection of the research data will be highly appreciated. The findings of the research will be pivotal to fostering management and decision-making practices. They will be shared with your organization upon request.

With Warm Regards,

Delphine Uwase



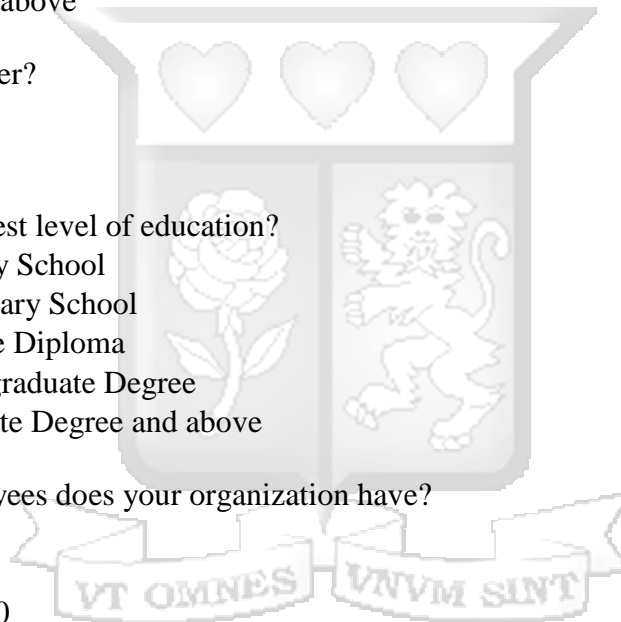
Appendix II: Questionnaire for the Managers

SMEs IN THE MANUFACTURING SECTOR IN NAIROBI COUNTY

Instructions: There are six sections in this questionnaire. Please take your time and read it carefully. Please indicate with a tick (✓) or across (×) in the box next to the answer of your choice.

Section A: General Information

1. What is your age?
 - ☐ 18 - 25
 - ☐ 26 - 33
 - ☐ 34 - 41
 - ☐ 42 - 49
 - ☐ 50 and above
2. What is your gender?
 - ☐ Male
 - ☐ Female
3. What is your highest level of education?
 - ☐ Primary School
 - ☐ Secondary School
 - ☐ College Diploma
 - ☐ Undergraduate Degree
 - ☐ Graduate Degree and above
4. How many employees does your organization have?
 - ☐ 0-20
 - ☐ 21-50
 - ☐ Over 50
5. How old is your organization?
 - ☐ 1-3 years
 - ☐ 4-6 years
 - ☐ 7-9 years
 - ☐ Over 10 years
6. How long have you been in the manufacturing sector?
 - ☐ 1-3 years
 - ☐ 4-6 years
 - ☐ 7-9 years
 - ☐ Over 10 years



Section B: Measures of the Organizational Performance of Small and Medium Manufacturing Firms in Nairobi County

Organizational Performance is the process of measuring an organization's outputs and results against its intended goals and objectives.

Please indicate in the table with a tick (✓) or across (×) with a scale of

5= strongly agree 4= Agree 3= Moderately Agreed 2= Disagree 1= Strongly Disagree

Kindly answer the following questions based on your agreement with the organization's performance. The scale level ranges from 1 – 5

No	Organization Performance	5	4	3	2	1
7.	The firm has been able to increase customer satisfaction since inception					
8.	The firm has been able to foster customer retention					
9.	The firm has been able to maintain a good relationship with its suppliers					
10.	The firm has been conscious of the environmental impact of its operations					
11.	The firm has attained growth in its operational revenues through better management					

Section C: Organization Structure of Small and Medium Manufacturing Firms in Nairobi County

Organization Structure is the distribution of work roles and administrative mechanisms that enable an organization to perform, coordinate and control its business activities and manage its resources.

Please indicate in the table with a tick (✓) or across (×) with a scale of

5= strongly agree 4= Agree 3= Moderately Agreed 2= Disagree 1= Strongly Disagree

Kindly answer the following questions based on your agreement with how organization structure influences organizational performance. The scale level ranges from 1 – 5

No	Organization Structure	5	4	3	2	1
12.	There is increased firm coordination towards the attainment of organization goals					
13.	There are control and command within the organization which improves firm performance					
14.	There is employee collaboration within the firm towards achieving organization goals					
15.	The firm has achieved implementation of governance practices					
16.	The firm has adopted internal processes geared towards promoting firm performance					
17.	There is firm coordination with the external stakeholders					

Section D: Technology Capability of Small and Medium Manufacturing Firms in Nairobi County

Technology Capability is the ability of an organization to understand and utilize technology to create competitive advantage.

Please indicate in the table with a tick (✓) or across (×) with a scale of

5= strongly agree 4= Agree 3= Moderately Agreed 2= Disagree 1= Strongly Disagree

Kindly answer the following questions based on your agreement with how technology capability influences organization performance. The scale level ranges from 1 – 5

No	Technological Capabilities	5	4	3	2	1
18.	The firm adopted modern systems for its operations					
19.	Innovative practices are encouraged and adopted within the firm					
20.	The implementation of new technologies has enhanced the firm's agility					
21.	Implementation of technology has led to the development of new services and the formation of new alliances					
22.	The firm employees are well conversant and have high technological expertise					
23.	The organization can lead and keep up with technological changes in the industry					

Section E: Management competency of Small and Medium Manufacturing Firms in Nairobi County

Management competency is the managerial capacity and ability to plan, organize, lead, communicate, and control business activities to achieve goals more efficiently and effectively.

Please indicate in the table with a tick (✓) or across (×) with a scale of

5= strongly agree 4= Agree 3= Moderately Agreed 2= Disagree 1= Strongly Disagree

Kindly answer the following questions based on your agreement with how management competency influences organization performance. The scale level ranges from 1 – 5

No	Management Competency	5	4	3	2	1
24.	The firm has put in place effective leadership practices					
25.	The firm's leadership has an effective communication and feedback system					
26.	There is an increased delegation of duties by the management of the firm					
27.	There are better recruitment and selection process within the firm					
28.	The management can form strong social network ties with employees, other stakeholders, and customers					
29.	Managers in our company can have good relationships with other business contact persons					

Appendix III: Sample Frame

Manufacturing Sub-Sector	Percentage of firms	Sample Respondents
The building, mining, and construction	3%	7
Chemical and allied	9%	20
Energy, electrical and electronics	5%	11
Food and beverages	22%	49
Leather and footwear	1%	2
Metal and allied	9%	20
Automotive	6%	13
Paper and Board	8%	18
Pharmaceutical and medical equipment	3%	7
Textiles and apparel	7%	16
Plastic and Rubber	3%	7
Services and consultancy	10%	22
Timber, wood, and furniture	2%	4
Agriculture and food processing	1%	2
Essential services (auxiliary)	11%	25
Total Target Population	100%	223

Appendix IV: Strathmore University Ethical Approval



19th November 2019

Ms Uwase, Delphine
delphine.uwase@strathmore.edu

Dear Ms Usawe,

RE: Determinant of Organizational Performance: An analysis of Small and Medium Enterprises in the Manufacturing Sector in Nairobi County


This is to inform you that SU-IERC has reviewed and **approved** your above research proposal. Your application approval number is SU-IERC0565/19 .The approval period is **19th November, 2019 to 18th November, 2020.**

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, MTA) will be used
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-IERC.
- iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-IERC within 72 hours of notification
- iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-IERC within 72 hours
- v. Clearance for export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days upon completion of the study to SU-IERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://oris.nacosti.go.ke> and also obtain other clearances needed.





Yours sincerely,


Dr Virginia Gichuru,
Secretary; SU-IERC

Cc: Prof Fred Were,
Chairperson; SU-IERC



Appendix V: NACOSTI Permit

 <p>REPUBLIC OF KENYA National Commission for Science, Technology and Innovation</p>	 <p>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION National Commission for Science, Technology and Innovation National Commission for Science, Technology and Innovation</p>
<p>Ref No: 141784</p>	<p>Date of Issue: 12/December/2019</p>
<p align="center">RESEARCH LICENSE</p>	
	
<p>This is to Certify that Miss. Delphine Uwase of Strathmore University, has been licensed to conduct research in Nairobi on the topic: Determinants of Organizational Performance of Small and Medium Manufacturing Enterprises in Nairobi County for the period ending : 12/December/2020.</p>	
<p>License No: NACOSTI/P/19/3040</p>	<p>Applicant Identification Number: 141784</p>
<p align="right">Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION</p>	
<p align="right">Verification QR Code</p>	
	
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